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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/056,647	01/22/2002	Ravi Prasad	10015567-1	9854

7590 12/28/2005

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

NECKEL, ALEXA DOROSHENK

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/056,647

Applicant(s)

PRASAD ET AL.

Examiner

Alexa D. Neckel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 and 53-62 is/are pending in the application.
- 4a) Of the above claim(s) 10, 11, 16 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-9, 12-15, 18-35 and 53-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/27/05; 8/18/05; 9/29/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-9, 12-15, 18-35 and 53-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hockaday et al. (2001/0045364) in view of Matkovich et al. (5,070,899).

Hockaday et al., in Fig. 9, discloses a fuel reservoir (7, 39), a reaction chamber (122), an open region (111) defined as a tubular member, and a flow resisting structure within the open region (110, 112), wherein the fuel containing substance within the fuel reservoir comprises sodium borohydride (abstract), wherein the reaction chamber comprises an inlet operably connected to the fuel reservoir and a gas outlet (Fig. 9). The cartridge further comprising a byproduct reservoir (7, 39) including a liquid inlet (Fig. 9) and a substantially gas permeable/liquid impermeable structure (106) separating the reaction chamber liquid outlet from the reaction chamber gas outlet. Wherein the passive structure creates capillary forces that resist fluid flow. The reaction chamber further comprising catalyst (Fig. 9).

Hockaday et al., in Fig. 3, further discloses a fuel reservoir (7, 39), a reaction chamber (Fig. 3) including a catalyst, wherein the fuel containing substance within the fuel reservoir comprises sodium borohydride (abstract), wherein the reaction chamber

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comprises an inlet operably connected to the fuel reservoir and a gas outlet (Fig. 3). The cartridge further comprising a byproduct reservoir (7, 39) including a liquid inlet operably connected to a liquid outlet of the reaction chamber (Fig. 3). The reaction chamber comprises an external housing (38) and a substantially gas permeable/liquid impermeable structure (31-32) forming a structure in which catalyst is at least partially located, wherein a space (36) is defined between the inner surface of the reaction chamber external housing and the outer surface of the enclosed substantially gas permeable/liquid impermeable structure the is in communication with the reaction chamber gas outlet (37).

Hockaday et al. fails to disclose where the flow resisting structure within the open region (110, 112) is a passive and porous structure, but rather discloses a valve.

Matkovich et al. teaches a valve which permits flow in one direction and prevents flow in the opposite direction, thus eliminating backflow (col. 1, lines 8-11 and lines 39-40) via first and second porous (as well as static or passive) elements (col. 1, lines 60-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the general valve (110) of Hockaday et al. with the check valve of Matkovich et al. in order to prevent backflow and yet still allow the desired fluid to flow to the reaction chamber.

With regard to the recitation of a second reactant in claims 31-35, it is noted that the material worked upon does not limit an apparatus claim. MPEP 2115.

Response to Arguments

Specification

The objections to the specification are withdrawn due to applicant's amendments. This examiner agrees that the reference to "slurry of coal" appears to be a word processing error.

Drawings

The objection to the drawings with withdrawn due to applicant's amendment to the drawing.

Claim Objections

The objections to claims 5-6, 13, 21 and 25 are withdrawn due to applicant's amendments.

35 USC 112

The rejection of claims 31-35 under 35 USC 112, first paragraph is withdrawn due to applicant's indication of support within the originally filed disclosure for a second reactant within the device.

35 USC 102

Applicant argues that the valve (110) of Hockaday et al. cannot be reasonably interpreted as a "passive structure".

The examiner agrees and withdraws the rejection of claims 1-8, 12-14 and 18-30 under 35 USC 102(a) and (e) in view of Hockaday et al. It is noted that a new grounds of rejection is presented above under 35 USC 103(a).

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35 USC 103

Applicant further argues that the porous structure of Yamada causes fluid rather than resists it.

The examiner agrees and withdraws the rejection of claims 9 and 15 over Hockaday et al. in view of Yamada et al. It is noted that a new grounds of rejection is presented above under 35 USC 103(a).

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexa D. Neckel whose telephone number is 571-272-1446. The examiner can normally be reached on Monday - Thursday from 9:00 AM - 7:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Alexa D. Neckel
Primary Examiner
Art Unit 1764

December 22, 2005


ALEXA DOROSHENK NECKEL
PRIMARY EXAMINER